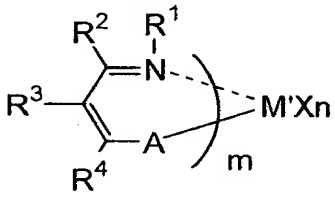
ABSTRACT

A process for producing a polar olefin copolymer comprises copolymerizing a non-polar olefin and a polar olefin in the presence of a transition metal compound selected from Groups 4, 5, 6 and 11 of the periodic table, which is represented by the following formula (IV):



...(IV)

wherein M' is a transition metal atom selected from Groups 4, 5, 6 and 11 of the periodic table, m is an integer of 1 to 6, A is -O-, -Si-, -Se-, -N(R^6)-, n is a number satisfying a valence of M', R^1 to R^4 and R^6 are each a hydrogen atom, a halogen atom, a hydrocarbon group and the like, and X is a halogen atom, an oxygen atom, a hydrocarbon group and the like, and at least one compound (B) selected from the group consisting of an organometallic compound (B-1), an organoaluminum oxy-compound (B-2) and an ionic ionizing compound (B-3). Therefore, the process is capable of obtaining a polar olefin copolymer having excellent properties under mild polymerization conditions.